

INTERNATIONAL PRELIMINARY EXAMINATION REPORT
(PCT Article 36 and Rule 70)



Applicant's or agent's file reference 122419X268	FOR FURTHER ACTION See Notification of Transmittal of International Preliminary Examination Report (Form PCT/PEA/416)	
International application No. PCT/NZ 03/00147	International filing date (day/month/year) 09.07.2003	Priority date (day/month/year) 12.07.2002
International Patent Classification (IPC) or both national classification and IPC G01N1/42		
Applicant CELENTIS LIMITED		

- This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.
- This REPORT consists of a total of 8 sheets, including this cover sheet.

☐ This report is also accompanied by ANNEXES, i.e. sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

 These annexes consist of a total of sheets.

- This report contains indications relating to the following items:
 - I ☒ Basis of the opinion
 - II ☐ Priority
 - III ☒ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
 - IV ☐ Lack of unity of invention
 - V ☒ Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
 - VI ☐ Certain documents cited
 - VII ☐ Certain defects in the international application
 - VIII ☐ Certain observations on the international application

Date of submission of the demand 21.01.2004	Date of completion of this report 18.10.2004
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I. Basis of the report

1. With regard to the **elements** of the international application (*Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17)*):

Description, Pages

1-14 as originally filed

Claims, Numbers

1-20 as originally filed

Drawings, Sheets

1/2-2/2 as originally filed

2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language: , which is:

- ☐ the language of a translation furnished for the purposes of the international search (under Rule 23.1(b)).
- ☐ the language of publication of the international application (under Rule 48.3(b)).
- ☐ the language of a translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).
3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:
- ☐ contained in the international application in written form.
- ☐ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.
4. The amendments have resulted in the cancellation of:
- ☐ the description, pages:
- ☐ the claims, Nos.:
- ☐ the drawings, sheets:

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5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)).

(Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.)

6. Additional observations, if necessary:

III. Non-establishment of opinion with regard to novelty, inventive step and industrial applicability

1. The questions whether the claimed invention appears to be novel, to involve an inventive step (to be non-obvious), or to be industrially applicable have not been examined in respect of:

☐ the entire international application,

☒ claims Nos. 19,20

because:

☐ the said international application, or the said claims Nos. relate to the following subject matter which does not require an international preliminary examination (specify):

☒ the description, claims or drawings (*indicate particular elements below*) or said claims Nos. 19, 20 are so unclear that no meaningful opinion could be formed (*specify*):

see separate sheet

☐ the claims, or said claims Nos. are so inadequately supported by the description that no meaningful opinion could be formed.

☐ no international search report has been established for the said claims Nos.

2. A meaningful international preliminary examination cannot be carried out due to the failure of the nucleotide and/or amino acid sequence listing to comply with the standard provided for in Annex C of the Administrative Instructions:

☐ the written form has not been furnished or does not comply with the Standard.

☐ the computer readable form has not been furnished or does not comply with the Standard.

V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes: Claims	2-12,14-18
	No: Claims	1,13
Inventive step (IS)	Yes: Claims	
	No: Claims	1-18
Industrial applicability (IA)	Yes: Claims	1-18
	No: Claims	

2. Citations and explanations

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Re Item III

Non-establishment of opinion with regard to novelty, inventive step and industrial applicability

Claims 19 and 20 are not allowable under Article 84 and Rule 6, 6.2 (a) PCT, since they contain references to the accompanying drawings and/or examples.

Re Item V

Reasoned statement with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

Reference is made to the following documents:

- D1: US-A-4 010 554 (COMPTON ROBERT W) 8 March 1977 (1977-03-08)
- D2: US-A-5 148 729 (KRUMDIECK CARLOS) 22 September 1992 (1992-09-22)
- D3: US-A-5 605 841 (JOHNSEN ERIK ET AL) 25 February 1997 (1997-02-25)
- D4: US-A-2 651 236 (HERBERT KAHLER) 8 September 1953 (1953-09-08)
- D5: US-A-4 633 087 (ROSENTHAL GLENN K ET AL) 30 December 1986 (1986-12-30)
- D6: US-A-5 456 125 (GAGNE HELEN M) 10 October 1995 (1995-10-10)
- D7: US-A-5 974 811 (HEID HANS ET AL) 2 November 1999 (1999-11-02)

1. The application contains independent claims 1, 13, 19 and 20, claims 19 and 20 being not allowable on grounds of Rule 6, 6.2 (a) PCT (c.f. Re Item III of this Written Opinion).
2. Independent claims 1 and 13 do not comply with the requirements of Articles 33 (1) and (2), PCT, for novelty, for the following reasons:
 - 2.1 The closest prior art for claims 1 and 13 is the document D1 describing a method and apparatus for cutting slices of uniform thickness from cooled brain tissue stabilized by a solified agar solution (col. 2, l. 50-col. 3, l. 13 of D1), the slices being re-assembled in a rectangular array as shown in fig. 2 of D1 (col. 3, l. 14-23).
 - 2.2 Claims 1 and 13 differs from D1 in that its method or apparatus, resp., renders the

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compound into a plurality of components of "substantially the same size". However, this is not a technical feature of the apparatus or the method, but merely a result to be achieved (Article 6 PCT). From the wording of claim 1, and in the same way, of claim 13, it is also evident that the components need not have exactly the same size, but only "substantially" the same size; this wording is vague and unclear and is not suitable to define the subject-matter for which protection is sought (Article 6 PCT). Though it is not explicitly disclosed in the description of D1 that all dimensions of the slices 12 are the same, it is implicitly clear from the description, in particular from col. 3, l. 3-44 and figs. 3, 5 and 7 of D1 that tissue components of strictly equal thickness are cut and that the slices cut by use of the guillotine type slicing machine mentioned in col. 3, l. 3-5, col. 3, l. 9-13 and re-assembled in a rectangular array have "substantially the same size"; this is true, in particular, for adjacent slices in the array, since the slices are "laid out in a rectangular array and in an orderly sequence", i.e. slices of almost equal dimensions lie adjacent to each other in the array (col. 3, l. 21-23). The applicant should take account of the fact that the wording "substantially the same size" is vague and unclear (Article 6 PCT), and that the technical feature which is described this way is not limiting, i.e. any tissue slices with similar dimensions would also have to be considered as having "substantially the same size". D1 also discloses the provision of a cooling means and a method step of actively cooling the compound under preparation to increase its rigidity (namely: a "liquid solidifying medium and preferably an agar-formalin solution" (col. 2, l. 62-64) which is "poured into the mold container to a level approximately three or four centimeters over the top surface of the brain [the compound]", and which is then "allowed to cool and jelly" (col. 2, l. 62-67), so that the mold can be removed, leaving a rectangular block surrounding the compound which can subsequently be sliced, c.f. col. 2, l. 67 - col. 3, l. 5. The technical features specified in claims 1 and 13 regarding the cooling process and cooling means, respectively, are therefore not novel over document D1. D1 also discloses the processing of the cooled compound, in the case of D1, the brain's tissue, into "a plurality of particles or components of substantially the same size". The terms of the "compound" and the "components", or the "particles or components", respectively, in claims 1 and 13 are vague and unclear (Article 6 PCT). However, it is clear from the description, p. 5, l. 20-p. 6, l. 4 of the application that the compound may be, among others, "plant or animal tissue", and that the so-called particles or components are thus slices of this tissue. In summary, claims 1 and 13 do not contain any technical features which are

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novel over D1.

Therefore claims 1 and 13 do not comply with Articles 33(1) and (2) PCT.

- 2.4 Moreover, the document D2 discloses a biological tissue slicer which allows cutting of "uniform tissue slices "of defined dimensions" by "eliminating excessive lateral and vertical movement of the blade" (c.f. abstract and col. 4, l. 20-39 of D2). It also mentions uniform cutting tissues of different consistencies and how this can be achieved (col. 4, l. 36-39). The skilled person, starting from the document D1 and seeking a solution to the technical problem of cutting uniform tissue slices would come across document D2 during search and would adapt its solution also to the device of D1, thereby arriving at a method according to claims 1 and 13 without an inventive step being involved.
- 2.5 From the last paragraph (2.4) it is evident that claims 1 and 13 do, in any case, not comply with Articles 33(1) and (3) PCT.
3. The dependent claims 3-18 do not comprise any technical features which are suitable to distinguish the method and apparatus of the application from the prior art (Art. 33(1) and (3) PCT), the reasons being as follows:
- 3.1 The technical features of claims 2 and 3 beyond those of the claims to which they refer are also disclosed in the document D1, c.f. col. 1, l. 22-27 and col. 1, l. 56-58, col. 2, l. 44-48 of D1, for the same or a similar technical purpose.
- 3.2 The additional technical features of claim 4 are known from the document D3, disclosing on-line analysis of biological materials by near infra-red spectrophotometry after comminuting the material to be analyzed (col. 1, l. 40-48, col. 3, l. 25-56 of D3). The technical purpose of these features is the same or similar as in the method of the application.
- 3.3 The additional technical features of claims 5-7, 14 and 15 are known from the document D4, for the same or a similar technical purpose (col. 1, l. 21-26 of D4). D4 describes cooling a microtome specimen holder with carbon dioxide.
- 3.4 The additional technical features of claims 8, 9 and 11 are known from the documents D1 and D2, for the same or a similar technical purpose (c.f. passages cited in connection with claims 1 and 13 in section 2 of this Report).

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- 3.5 The additional technical features of claim 12 are known from the document D5, for the same or a similar technical purpose, D5 describing near infra quantitative analysis of fat/oil in living bodies, for instance plant seeds which are subject to grinding prior to analysis (col. 1, l. 8-59 of D5).
- 3.6 The additional technical features of claims 10 and 16 are disclosed in D6, for the same or a similar technical purpose (c.f. col. 2, l. 21-54, col. 4, l. 17-29 and figs. 1 and 2 of D6), D6 describing a membrane cutter with rotating dies.
- 3.7 The additional technical features of claims 17 and 18 are disclosed in D7, for the same or a similar technical purpose (c.f. abstract, col. 1, l. 51-56 of D7), D7 disclosing a suction device for cryostatic microtomes.
4. None of the present claims seems to meet the requirements of Articles 33 (1), (2) and (3).